

REMARKS

Claims 1, 2, 4-19, 21, and 23-39 are pending in this application. Claim 1 has been rejected under 35 USC 103(a) over Head. Claim 1 has been amended to better define the invention and, for that reason, the rejection of claim 1 is respectfully traversed. Further, since all claims ultimately depend from claim 1 and this claim is believed to be in condition for allowance, the remaining rejections are respectfully traversed, as well.

Claim 1 requires “a pair of sheets comprising fibre reinforced plastic is arranged with a gap between them and a rib structure which is integrally molded by a resin transfer molding process to the pair of sheets is interposed” and “a rib structure which is interposed between the sandwich structures and integrally molded by a resin transfer molding process to the sandwich structures”, as described and shown with reference to figs. 25, and 28-30. These features are not taught, disclosed, or suggested by Head. In the Office Action, it is asserted that Head teaches one of these features. The assertion is incorrect, in that at column 2, lines 1-4, Head states that “the flat plank member. . . being formed in a single pultrusion process”. Head further explains the pultrusion process in the paragraph bridging cols. 3-4, as follows:

“The flat plank member 1 is a rigid, hollow, integral, pultruded structure of glass fibre reinforced plastics material. It is formed in a single pultrusion operation. In the technique known as "pultrusion" a complete member can be pulled from an aperture of appropriate shape. By this technique, continuous glass reinforcing rovings and mat impregnated with plastics material can be pulled through a heated die system. The complete member is heated and cured as it is pulled from the die system. The rigid closed cell foam filling is preferably foamed into the member as part of the continuous process of manufacture, although it may alternatively be placed in the member at a later stage.”

In contrast, the specification of the present application describes how a rib structure which is integrally molded by a resin transfer molding process to the pair of sheets on page 28, line 30 to page 31, line 2. The Examiner is respectfully requested to review this portion of the disclosure and should conclude that the pultrusion process of Head does not disclose the resin transfer molding process of the present application. This is so because, in the pultrusion process,

reinforcing fiber structure is impregnated with plastic material and pulled though a heated die system. In the resin transfer molding process of claim 1, molded fiber structure is impregnated with a resin, to allow them to be integrally molded.

In fact, it is not possible to manufacture large-size fiber reinforced structures, as are required by claim 1, by the pultrusion process. Claim 1 requires that “the sandwich structure [have] a length of from 10 m to 25 m and a width of from 1.5 m to 3.5 m”. Clearly, one of ordinary skill in the art could not substitute the pultrusion process of Head for the resin transfer molding process of the present invention, when it would not be possible to create, by pultrusion, structures of the size required by claim 1. This is further illustrated in the original specification on page 35, where it is noted that the present invention permits the creation of large FRP roofing materials with excellent weathering and wear properties which are integrally molded.

Applicants also note that Rothman (used in an alternate rejection of claim 1) is incorrectly characterized as illustrating “a rib structure which is integrally molded by a resin transfer molding process to the pair of sheets”. There is, in fact, no suggestion by Rothman that members 22, 24, and 44 are made by a resin transfer molding process. As noted in col. 7, lines 18-21 and 34-38, “[t]he F-shaped pultrusion angle member forming the side walls of the embodiment of the present invention shown in Fig. 4 are formed by pulling the resin through an F-shaped die. . . . The reinforcing members may be made by the same process used to make the pultrusion angle members forming the side walls of the panel. Thus, it is proper to refer to reinforcing members 44 and 54 as pultrusion reinforcing members.”

For these reasons, neither Head nor Rothman teach, disclose, or suggest claim 1 of the present application in a manner that one of ordinary skill in the art would find obvious. Neither of the cited references shows a resin transfer molding process for making an FRP roofing material according to claim 1. The rejection of claim 1 under 35 USC 103(a) and claims depending therefrom should , therefore, be withdrawn.

All claims are now in condition for allowance and a notice thereof is earnestly solicited.

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Respectfully submitted,

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